

Quality of life of persons with periodontal diseases

(Jakość życia osób z chorobami przyzębia)

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Abstract – Introduction. The interest in the quality of life as far as health is concerned has recently noticeably increased. Such an attitude towards health may result from the acceptance of a holistic approach to a person. Studies on the influence of the health of oral cavity on the patient's quality of life are relatively infrequent. Nowadays, such studies can utilise general as well as specific indices.

The aim of this study was to determine the quality of life of persons suffering from periodontal diseases basing on the GOHAI (Geriatric Oral Health Assessment Index) questionnaire.

Materials and Methods. The study was carried out between 3 November and 15 December 2014 in the company dental clinic of the Polish Security Printing Works in Warsaw. The studied group consisted of 32 persons (11 women and 21) men aged 27-67. Each of the studied people underwent a two-stage process:

Stage I

At first, a dentist carried out a clinical examination assessing the patient's needs for treatment and the health of oral cavity. Each of the patients was examined in artificial lighting, with a mirror and a dental probe. In this stage, a group of persons with periodontal diseases was selected. The group was subject to further study in the stage II – the survey.

Stage II

Survey study with the use of the GOHAI (Geriatric Oral Health Assessment Index) questionnaire.

Results and Conclusions. 1. The distribution of answers (score) for given questions of the GOHAI questionnaire was strongly diversified. Among the studied persons, the score distribution ranged from 19 to 46. The average score obtained by the persons suffering from periodontal diseases was 30. 2. Most of the conditions resulting from the development of periodontal diseases occurred with various frequency in 1/3 to ca. 1/2 of the respondents. 3. For a more in-depth analysis, the repetition of this type of study on a considerably greater number of persons suffering from periodontal diseases will be required.

Key words - periodontal diseases, GOHAI, quality of life.

Streszczenie – Wstęp. W ostatnim okresie czasu zdecydowanie wrażliwiej zainteresowanie jakością życia w aspekcie zdrowia. Takie spojrzenie na zdrowie może wynikać z uznania i zaakceptowania holistycznego spojrzenia na człowieka. Badania dotyczące wpływu zdrowia jamy ustnej na jakość życia pacjentów są prowadzone stosunkowo rzadko. Współcześnie do tych badań można wykorzystywać wskaźniki zarówno ogólne, jak i specyficzne.

Celem badań było określenie jakości życia chorych na choroby przyzębia na podstawie badania ankietowego kwestionariuszem GOHAI (Geriatric Oral Health Assessment Index).

Materiał i metodyka. Badania przeprowadzono w okresie od 3 listopada do 15 grudnia 2013 r. w przykładowej przychodni stomatologicznej Państwowej Wytwórni Papierów Wartościowych w Warszawie. W badanej grupie było 32 osoby (11 kobiet i 21 mężczyzn) w wieku 27-67 lat.

Każdego badanego objęto dwuetapowym badaniem:

I etap

Najpierw lekarz dentysta przystąpił do badania klinicznego, w którym oceniono występowanie potrzeb leczniczych u pacjentów oraz stan zdrowia jamy ustnej. Każdy pacjent został zbadany przy sztucznym oświetleniu, przy użyciu lusterka i zgłębnika. Na tym etapie wyselekcjonowano grupę chorych z chorobami przyzębia. Ta grupa była przedmiotem dalszych badań w II etapie- badań ankietowych.

II etap

Badanie ankietowe kwestionariuszem GOHAI (Geriatric Oral Health Assessment Index).

Wyniki badań i wnioski. 1. Rozkład odpowiedzi (punktacji) na poszczególne pytania kwestionariusza GOHAI był mocno zróżnicowany. Wśród badanych rozkład punktacji wahał się w przedziale 19-46. Średnia ilość punktów jaką uzyskali chorzy na choroby przyzębia wynosiła 30. 2. Większość dolegliwości wynikające z rozwoju chorób przyzębia występowały z różną częstością wahającą się od jednej trzeciej do około połowy liczby ankietowanych. 3. Dla dokonania bardziej pogłębionej analiz konieczne jest powtórzenie tego typu badań na zdecydowanie większej grupie chorych z chorobami przyzębia.

Słowa kluczowe - choroby przyzębia, GOHAI , jakość życia.

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- A. The idea and the planning of the study
- B. Gathering and listing data
- C. The data analysis and interpretation
- D. Writing the article
- E. Critical review of the article
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I. INTRODUCTION

The interest in the quality of life as far as health is concerned has recently increased noticeably. Such an attitude towards health may result from the acceptance of the holistic approach to a person. It is also justified by intensified efforts to prolong human life and to increase the quality of this life in the period of ageing or during an illness [1-5]. Although the first studies concerning the quality of life took place in the 70s, no universal definition of this concept has been formulated so far. It may be one of the reasons for using various methods of studying quality of life. Contemporary assessment methods for the quality of life can be classified according to the following criteria [1,2,6]:

- 1) The administering criterion (way of use):
 - a patient carries out the assessment on his/her own (self-administering),
 - an interviewer carries out the assessment by interviewing a patient,
- 2) The content criterion (the scope of the assessment):
 - a general assessment,
 - a detailed assessment (e.g. everyday activity – a detailed index of activities).

Depending on the sphere of patient's life which remains within the scope of a study – e.g. physical/psychical health status, locomotor activity, everyday activities, relationships with the social group – various studies have been developed. The studies on the influence of the health of oral cavity on the patient's quality of life are relatively infrequent, which has encouraged the authors

to undertake their own study. The aim of this study was to determine the quality of life of persons suffering from periodontal diseases basing on the GOHAI (Geriatric Oral Health Assessment Index) questionnaire.

II. MATERIALS AND METHODS

The interest in the quality of life as far as health is concerned has recently increased noticeably. Such an attitude towards health may result from the acceptance of the holistic approach to a person. It is also justified by intensified efforts to prolong human life and to increase the quality of this life in the period of ageing or during an illness [1-5]. Although the first studies concerning the quality of life took place in the 70s, no universal definition of this concept has been formulated so far. It may be one of the reasons for using various methods of studying quality of life. Contemporary assessment methods for the quality of life can be classified according to the following criteria [1,2,6]:

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III. RESULTS

Among 32 of the studied persons, the score distribution ranged from 19 to 46. The average score obtained by the persons suffering from periodontal diseases was 30.

The distribution of answers among the 32 persons surveyed with the GOHAI questionnaire has been presented in Table 1.

Table 1. GOHAI questionnaire and the distribution of answers to each question

GOHAI - questions	Always	Often	Sometimes	Rarely	Never
	the number of cases/%	the number of cases/%	the number of cases/%	the number of cases/%	the number of cases/%
1. How often did you limit the kinds or amounts of food you eat because of problems with your teeth or dentures?	4/ 12.5%	7/ 21.9%	8/ 25%	10/ 31.3%	3/ 9.3%
2. How often did you have trouble biting or chewing any kinds of food, such as firm meat or apples?	7/ 21.9%	8/ 25%	8/ 25%	10/ 31.3%	2/ 6.3%
3. How often were you able to swallow comfortably?	12/ 37.5%	8/ 25%	10/ 31.3	2/ 6.3%	0
4. How often have your teeth or dentures prevented you from speaking the way you wanted?	2/ 6.3%	7/ 21.9%	10/ 31.3%	5/ 15.6%	8/ 25%
5. How often were you able to eat anything without feeling discomfort?	2/ 6.3%	7/ 21.9%	6/ 18.8%	12/ 37.5%	5/ 15.6%
6. How often did you limit contacts with people because of the condition of your teeth or dentures?	0	5/ 15.6%	15/ 46.9%	2/ 6.3%	10/ 31.3%
7. How often were you pleased or happy with the looks of your teeth and gums, or dentures?	1/ 3.1%	3/ 9.3%	21/ 65.6%	7/ 21.9%	0
8. How often did you use medications to relieve pain or discomfort from around your mouth?	5/ 15.6%	10/ 31.3%	9/ 28.1%	4/ 12.5%	4/ 12.5%
9. How often were you worried or concerned about the problems with your teeth, gums or dentures?	6/ 18.8%	10/ 31.3%	6/ 18.8%	6/ 18.8%	4/ 12.5%
10. How often did you feel nervous or self-conscious because of problems with your teeth, gums or dentures?	1/ 3.1%	6/ 18.8%	13/ 40.6%	4/ 12.5%	8/ 25%
11. How often did you feel uncomfortable eating in front of people because of problems with your teeth or dentures?	4/ 12.5%	7/ 21.9%	12/ 37.5%	6/ 18.8%	3/ 9.3%
12. How often were your teeth or gums sensitive to hot, cold or sweets?	16/ 50%	8/ 25%	8/ 25%	0	0

The most frequent responses are listed below.

Question I – How often did you limit the kinds or amounts of food you eat because of problems with your teeth or dentures? The most frequent answer was the statement that oral cavity conditions *rarely* limited the type or the quantity of eaten food.

Question II – How often did you have trouble biting or chewing any kinds of food, such as firm meat or apples? The most frequent statement – 31.3% – was that conditions related to oral cavity *rarely* caused problems with biting or chewing food.

Question III – How often were you able to swallow comfortably? Answering this question, the patients had probably in mind the actual act of swallowing. The obtained data shows that most frequently – in 37.5% of the cases – the respondents noticed *no* problems with swallowing, thus they did not report any symptoms of dysphagia.

Question IV – How often have your teeth or dentures prevented you from speaking the way you wanted? The authors' own research shows that the most frequent answer – 31.3% – was that periodontal diseases *sometimes* caused difficulties with articulation.

Question V – How often were you able to eat anything without feeling discomfort? The highest number of the studied persons – 37.5% – admitted that they had *rarely* eaten without the accompanying feeling of discomfort.

Question VI – How often did you limit contacts with people because of the condition of your teeth or dentures? The data from the authors' own study indicate that the respondents displayed reluctance regarding the contacts with people from the community. However, most frequently – in 46.9% of the cases – the reluctance was of rare nature, described with the expression *sometimes*.

Question VII – How often were you pleased or happy with the looks of your teeth and gums, or dentures? A vast majority of the respondents – 65.6% – claimed that they had been only *sometimes* satisfied with the health status of their oral cavity.

Question VIII – How often did you use medication to relieve pain or discomfort from around your mouth? The highest number of the respondents – 31.3% – admitted that they had *often* taken pain-relieving medications and felt discomfort from around their mouth.

Question IX – How often were you worried or concerned about the problems with your teeth, gums or dentures? Most frequently – in 31.3% of the cases – the respondents indicated that their oral cavity health status had *often* made them concerned.

Question X – How often did you feel nervous or self-conscious because of problems with your teeth, gums or dentures? The authors' own study discloses that most frequently – in 40.6% of the cases – an oral cavity disease only *sometimes* caused nervousness in the respondents.

Question XI – How often did you feel uncomfortable eating in front of people because of problems with your teeth or dentures? The data obtained by the authors reveal, however, that the respondents *sometimes* experienced this type of discomfort related to problems with teeth (37.5% of the respondents answered in this way).

Question XII – How often were your teeth or gums sensitive to hot, cold or sweets? A vast majority – 50% of the whole group – *always* experienced hypersensitivity to cold or sweet food.

The presented analysis shows an image of the quality of life of a contemporary Polish person suffering from periodontal diseases. Such a person, due to periodontal diseases:

rarely	• suffers from limitations concerning the type or quantity of eaten food
rarely	• has problems with biting or chewing various types of food
has no problems	• with swallowing food
sometimes	• has problems with proper articulation
rarely	• feels discomfort during eating
sometimes	• limits contacts with other people
sometimes	• only is pleased with the looks of his/her teeth and gums
often	• uses pain-relieving medications and/or feels discomfort in oral cavity
often	• his/her conditions related to oral cavity make him/her concerned
sometimes	• feels self-conscious because of problems with his/her teeth and gums
sometimes	• feels nervous or self-conscious because of problems with his/her teeth and gums
sometimes	• feels uncomfortable eating in front of people because of problems with his/her teeth
always	• has teeth or gums sensitive to heat, cold or sweets

The quality of life of persons suffering from a given disease is influenced to great extent by the frequency of experienced negative effects of the disease. In the case of the persons suffering from periodontal diseases, the percentage of negative feelings related to an oral cavity disease was as follows (the analysis based on the GOHAI questionnaire):

Table 2. Negative feelings related to periodontal diseases experienced by the respondents

Negative feelings related to an oral cavity disease	the number of cases	% ^{1/}
1. Limiting eaten food	14	43.8
2. Problems with chewing	15	46.9
3. Problems with swallowing	12	37.5
4. Articulation	19	59.4
5. Feeling discomfort	15	46.9
6. Limiting contacts	20	62.5
7. Satisfaction from the looks of teeth, dentures	7	21.9
8. Taking medications	24	75.0
9. Feeling concerned	22	68.8
10. Feeling nervous	20	62.5
11. Discomfort when eating in front of people	23	71.9
12. Sensitivity to cold, heat, sweets	32	43.8
Average		51.3

^{1/} a percentage calculated in relation to the overall number of the studied persons

The survey discloses that the average frequency of experiencing negative feelings involved over a half of the respondents.

IV. DISCUSSION

Quality of life is a multifaceted concept. One of the research directions involves the health of an individual. In 1948, the World Health Organisation defined health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" [8]. In 1990, Schipper *et al.* [5] introduced the concept of "Health Related Quality of Life" (HRQoL). They define it as "the functional effect of an illness and its consequent

therapy upon a patient". Nowadays, it is emphasised that the analysis of "the health-related quality of life" one should take into consideration both objective assessment of the patient's health status, made by qualified medical personnel, and subjective assessment made by the patient. [9-14]

This study has therefore fulfilled the postulates for this kind of research. A proper clinical diagnosis was established by a dentist, whereas subjective assessment of the oral cavity health status was carried out by the patient himself. In this study, the patient's self-assessment has become one of the basic research tools. For its evaluation, standardised general tools as well as specific ones, as the GOHAI (Geriatric Oral Health Assessment Index) questionnaire, were used. Gałczyńska-Rusin *et al.* emphasise that the Polish version of the GOHAI questionnaire displays satisfying psychometric characteristics and it can be a valuable research instrument for studies of the quality of life determined by health status, including the oral cavity health status [11]. The authors draw attention to the high reliability, accuracy and sensitivity of the GOHAI in the selection of correlations.

The authors' own study indicates that the distribution of answers (score) for given questions of the GOHAI questionnaire was strongly diversified. Among the studied persons, the score distribution ranged from 19 to 46. The average score obtained by the persons suffering from periodontal diseases was 30. Among the answers of the respondents, we find the ones concerning the frequency of the use of pain-relieving medications particularly important. Almost a half of the respondents stress the need for taking medications relieving the pain in oral cavity – always or often. It is alarming, especially in the context of the risk of the damage to the stomach and duodenum mucosa and development of events e.g. gastrointestinal haemorrhage. What also draws one's attention is the fact that almost a half of the studied persons is worried about the health status of their oral cavity; however, basing on the author's individual interviews with them, there is no consequent greater care for oral cavity hygiene or noticeably more frequent visits to the dentist. Other conditions resulting from the development of periodontal diseases occurred with various frequency in 1/3 to ca. 1/2 of the respondents. The survey discloses that the average frequency of experiencing negative feelings involved over a half of the respondents.

It is worth emphasising that, during the creation of the characteristics of a patient suffering from periodontal diseases, such a patient most frequently uses the expressions *rarely* or *sometimes* to describe his/her conditions related to oral cavity. Most of the patients probably do

not attach great importance to the conditions of oral cavity, they consider them "normal"; however, it is also possible that the patients are not always honest in their answers in the survey, as the clinical progression of periodontal diseases did not correspond to the statements in the survey (interview) in the case of some of the patients. Undoubtedly, for a more in-depth analysis, the repetition of this type of study on a considerably greater number of persons suffering from periodontal diseases will be required.

V. CONCLUSIONS

1. The distribution of answers (score) for given questions of the GOHAI questionnaire was strongly diversified. Among the studied persons, the score distribution ranged from 19 to 46. The average score obtained by the persons suffering from periodontal diseases was 30.
2. Most of the conditions resulting from the development of periodontal diseases occurred with various frequency in 1/3 to ca. 1/2 of the respondents.
3. For a more in-depth analysis, the repetition of this type of study on a considerably greater number of persons suffering from periodontal diseases will be required.

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